

Search Strategy

No.	Database	Search term	Info added since	Results
1	INZZ	allocate AND priority	unrestricted	168

Report Information
from Dialog DataStar



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A bit-parallel search algorithm for allocating free space.

Accession number & update

0007167975 20051201.

Conference information

MASCOTS 2001. Proceedings of the Ninth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems, Cincinnati, OH, USA, 15-18 Aug. 2001.

Sponsor(s): IEEE Comput. Soc. Tech. Committee on Simulation; IEEE Comput. Soc. Tech. Committee on Comput. Archit; ACM SIGSIM; ACM SIGARCH.

Source

MASCOTS 2001, Proceedings Ninth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems, 2001, p. 302-10, 16 refs, pp. xii+432, ISBN: 0-7695-1315-8. Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA.

Author(s)

Burns-R, Hineman-W.

Author affiliation

Burns, R., Hineman, W., IBM Almaden Res. Center, San Jose, CA, USA.

Abstract

File systems that **allocate** data contiguously often use bitmaps to represent and manage free space. Increases in the size of **storage** to be managed creates a need for efficient algorithms for searching these bitmaps. We present an algorithm that exploits bit-parallelism, examining all bits within a processor word at the same time, to improve search performance. Measurements of our implementation show that these techniques lead to a 14 times increase in the rate at which bitmap pages can be searched on a 64-bit processor. Trace-driven experiments indicate that overall allocation performance increases by a factor of 3 to 6 on a 32-bit processor. As processors mature, registers become wider and the degree of bit-level parallelism increases, which makes the performance improvements of our search algorithm more substantial.

Descriptors

DATA-STRUCTURES; PARALLEL-ALGORITHMS; SEARCH-PROBLEMS; **STORAGE-MANAGEMENT**.

Classification codes

C6120 File-organisation*;

C4240P Parallel-programming-and-algorithm-theory.

Keywords

bit-parallel-search-algorithm; free-space-allocation; file-systems; bitmaps; free-space-management; **storage-size**; efficient-search-algorithms; data-structure; **storage-area-network**; bit-parallelism-algorithm; search-performance; processors; registers; 32-bit; 16-bit.

Treatment codes

T Theoretical-or-mathematical;

X Experimental.

Numerical indexing

word length: 3.2E01 bit.

word length: 1.6E01 bit.

Language

English.

Publication type

Conference-proceedings.

Availability

CCCC: 0-7695-1315-8/01/\$10.00.

Digital object identifier

10.1109/MASCOT.2001.948881.

Publication year

2001.

Publication date

20010000.

Edition

2002005.

Copyright statement

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Search Strategy

No.	Database	Search term	Info added since	Results
1	INZZ	(storage ADJ area ADJ network OR NETWORK ADJ ADJ2 ADJ STORAGE) AND PRIORITY AND BILLING	unrestricted	0
2	INZZ	(storage ADJ area ADJ network OR network ADJ storage) AND priority AND billing	unrestricted	0
3	INZZ	storage ADJ area ADJ network	unrestricted	313
4	INZZ	3 AND priority	unrestricted	0
5	INZZ	3 AND bill	unrestricted	0
6	INZZ	3 AND billing	unrestricted	0
7	INZZ	ALLOCATE	unrestricted	4049
8	INZZ	allocate	unrestricted	4049
9	INZZ	3 AND allocate	unrestricted	2

Report Information
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Packet reservation protocol for personal mobile communications.

Accession number & update

0007948166 20051201.

Conference information

Proceedings of the 2003 10th IEEE International Conference on Electronics, Circuits, and Systems, Sharjah, United Arab Emirates, 14–17 Dec. 2003.

Sponsor(s): IEEE; IEEE Circuits and Syst. Soc; Univ. of Sharjah; Etisalat College of Eng; Emirates Telecommunications Corp.

Source

Proceedings of the 2003 10th IEEE International Conference on Electronics, Circuits, and Systems (IEEE Cat. No.03EX749), Vol.3, p. 1268–71 Vol.3, 10 refs, pp. lii+1339, ISBN: 0–7803–8163–7. Publisher: IEEE, Piscataway, NJ, USA.

Author(s)

Glass–A, Amott–M, Harris–R.

Author affiliation

Glass, A., Dept. of Planning & Training, Tech. Studies Inst., Abu– Dhabi, United Arab Emirates.

Abstract

A packet/cell reservation protocol is proposed for operation in a GPRS environment. The operation of the protocol exploits the advantages of contending random access protocols for reservation purpose while accommodating a hybrid form of GSM and ATM systems to enable the provision of services to mobile users. The protocol provides reservation **priority** for voice and inter–active real–time services in a multichannel environment. The protocol also uses a voice activity detector to eliminate unused reserved time slots in any frame payload and then **allocate** them to other users that have a lower **priority**. A simulation model has been established to mimic the operation of the protocol for voice and data traffic. The results show better overall channel utilisation together with lower overall time delay for data messages.

Descriptors

CELLULAR–RADIO; PACKET–RADIO–NETWORKS; PACKET–RESERVATION–MULTIPLE–ACCESS; QUALITY–OF–SERVICE.

Classification codes

B6250F Mobile–radio–systems*;
B6150E Multiple–access–communication;
B6150M Protocols.

Keywords

packet–reservation–protocol; personal–mobile–communications; GPRS–environment; contending–random–access–protocols; hybrid–GSM–ATM; **reservation–priority–for–voice**; inter–active–real–time–services; multichannel–environment; simulation–model; voice–and–data–traffic; quality–of–service; continuity–reservation–arrival; operational–performance.

Treatment codes

P Practical.

Language

English.

Publication type

Conference–proceedings.

Availability

CCCC: 0–7803–8163–7/03/\$17.00.

Publication year

UNDATED.

Publication date

UNDATED.

Edition

2004017.

Copyright statement

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Program-controlled data processing system.

Accession number & update

0000759475 20051201.

Patent information

Patent number: GB-1377165.

Filing/submission date: 19720223.

Patent assignee: Siemens AG.

Publication date: 19741211.

Country of publication: UK.

Priority information

Original patent number: DE-117128.

Country of original patent application: West Germany.

Priority date: 19710407.

Abstract

When a store is ready to **allocate** a storage cycle, it provides a first static signal, processors requiring a connection to a store provide a second static signal and a dynamic signal, a storage cycle is only started if all the stores have acknowledged the requests by transmitting a second dynamic signal to all the processors, and a blocked connection between a processor and store is indicated by either the processor or store removing its static signal. The processors establish a connection by transmitting the two signals simultaneously. When a store is reconnected into the system after being repaired/replaced, it provides a third static signal to initiate transfer of information concerning the existing system connections to it from a duplicate store.

Descriptors

FAULT-TOLERANT-COMPUTING; GENERAL-PURPOSE-COMPUTERS.

Classification codes

C5420 Mainframes-and-minicomputers*.

Keywords

program-controlled-data-processing-system; storage-cycle; static-signal; processors; dynamic-signal; transfer-of-information; duplicate-store.

Treatment codes

A Application;

N New-development;

P Practical.

Language

English.

Publication type

Patent.

Publication year

1974.

Publication date

19741211.

Edition

1975005.

Copyright statement

Copyright 1975 IEE.

Adaptive scheduling at mobiles for wireless networks with multiple priority traffic and multiple transmission channels.

Accession number & update

0006702762 20051201.

Conference information

Proceedings of 6th International Conference on High Performance Computing (HiPC'99) – Mobile Computing for this Millenium, Calcutta, India, 17–20 Dec. 1999.

Source

High Performance Computing – HiPC'99. 6th International Conference. Proceedings. (Lecture Notes in Computer Science Vol.1745), 1999, p. 234–8, 5 refs, pp. xxii+412, ISBN: 3–540–66907–8. Publisher: Springer–Verlag, Berlin, Germany.

Author(s)

Damodaran–S, Sivalingam–K–M. Editor(s): Banerjee–P, Prasanna–V–K, Sinha–B–P.

Author affiliation

Damodaran, S., Cisco Syst., San Jose, CA, USA.

Abstract

This paper considers scheduling algorithms for an infrastructure network where: (i) multiple channels are available per cell; and (ii) a mobile reservation and base station scheduling protocol is used for medium access. The paper describes adaptive scheduling algorithms implemented at the mobile which modify the allocation provided by the base station. The motivation to do this is that under certain conditions, a mobile may wish to **re-allocate** its transmission slots between its **priority** queues based on the current queue status and other information. We propose an aging **priority** scheme where sessions who were forced to give up their allocated slots are provided increasing **priority**. The overall performance improvement for higher **priority** packets and corresponding performance degradation for lower **priority** packets is studied using discrete event simulation.

Descriptors

ACCESS–PROTOCOLS; DISCRETE–EVENT–SIMULATION; MOBILE–COMPUTING; MOBILE–RADIO; PACKET–RADIO–NETWORKS; PERFORMANCE–EVALUATION; QUEUEING–THEORY; SCHEDULING; TELECOMMUNICATION–TRAFFIC; WIRELESS–LAN.

Classification codes

B6150M Protocols*;
B6210L Computer–communications;
B6150J Queueing–systems;
B6250F Mobile–radio–systems;
C5640 Protocols*;
C5620L Local–area–networks;
C5670 Network–performance.

Keywords

wireless–networks; **multiple**–priority–traffic; multiple–transmission–channels; infrastructure–network; mobile–reservation–protocol; base–station–scheduling–protocol; medium–access–protocol; adaptive–scheduling–algorithms; transmission–slot–reallocation; **priority**–queues; **aging**–priority–scheme; performance–improvement; discrete–event–simulation; **packet**–priority; WLAN.

Treatment codes

P Practical.

Language

English.

Publication type

Conference–proceedings.

Publication year

1999.
Publication date
19990000.
Edition
2000036.
Copyright statement
Copyright 2000 IEE.

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Resource allocation for multimedia traffic flows using rate variance envelopes.

Dialog eLinks

USPTO Full Text Retrieval Options

Accession number & update
0006449259 20051201.

Source

Multimedia Systems, {Multimedia-Syst-Germany}, Nov. 1999, vol. 7, no. 6, p. 477-85, 31 refs, CODEN: MUSYEW, ISSN: 0942-4962. Publisher: Springer-Verlag, Germany.

Author(s)

Knightly-E-W.

Author affiliation

Knightly, E.W., Dept. of Electr. & Comput. Eng., Rice Univ., Houston, TX, USA.

Abstract

In order for networks to support the delay and loss requirements of interactive multimedia applications, resource management algorithms are needed that efficiently **allocate** network resources. We introduce a new resource allocation scheme based on rate variance envelopes. Such envelopes capture a flow's burstiness properties and autocorrelation structure by characterizing the variance of its rate distribution over intervals of different length. From this traffic characterization, we develop a simple and efficient resource allocation algorithm for static **priority** schedulers by employing a Gaussian approximation over intervals and considering a maximal busy period. Our approach supports heterogeneous quality-of-service requirements via our consideration of prioritized service disciplines, and supports heterogeneous and bursty traffic flows via our general framework of traffic envelopes. To evaluate the scheme, we perform trace-driven simulation experiments with long traces of compressed video and show that our approach is accurate enough to capture most of the available statistical multiplexing gain, achieving average network utilizations of up to 90% for these traces and substantially outperforming alternative schemes.

Descriptors

MULTIMEDIA-COMMUNICATION; QUALITY-OF-SERVICE; RESOURCE-ALLOCATION;
TELECOMMUNICATION-TRAFFIC.

Classification codes

B6210R Multimedia-communications*;
B6150P Communication-network-design-planning-and-routing.

Keywords

multimedia-traffic-flows; rate-variance-envelopes; resource-allocation; interactive-multimedia-applications; resource-management-algorithms; burstiness-properties; autocorrelation-structure; traffic-characterization; **static**-priority-schedulers; Gaussian-approximation; heterogeneous-quality-of-service; prioritized-service-disciplines; bursty-traffic-flows; trace-driven-simulation; compressed-video.

Treatment codes

T Theoretical-or-mathematical.

Language

English.

Publication type

Journal-paper.

Availability

SICI: 0942-4962(199911)7:6L:477:RAMT; 1-4.

CCCC: 0942-4962/99/\$2.00+0.20.

Publication year

1999.

Publication date

19991100.

Edition

1999050.

Copyright statement

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Performance evaluation of bandwidth partitioning in broadband networks.

Accession number & update

0006703681 20051201.

Conference information

ATM 2000. Proceedings of the IEEE Conference 2000 on High Performance Switching and Routing, Heidelberg, Germany, 26-29 June 2000.

Sponsor(s): IEEE Commun. Soc; VDE.

Source

ATM 2000. Proceedings of the IEEE Conference on High Performance Switching and Routing (Cat. No.00TH8485), 2000, p. 411-18, 10 refs, pp. 556, ISBN: 0-7803-5884-8. Publisher: IEEE, Piscataway, NJ, USA.

Author(s)

Randhawa-T-S, Hardy-R-H-S.

Author affiliation

Randhawa, T.S., TTC, Burnaby, BC, Canada.

Abstract

The capability to optimally **allocate** network resources such as bandwidth is a key to the economical viability of modern telecommunication networks. Requirements such as, adaptive updating of bandwidth allocations to track dynamical load variations, and preferential treatment for some services at the expense of others, based on economic considerations, however, add to the complexity of the task. We propose a framework of an integrated traffic engineering system that caters to these requirements. Based on the current global network state, the system projects the future network state and determines optimal bandwidth partitioning among the competing services that maximizes network revenue while maintaining prescribed QoS (quality of service) in broadband networks. The functionality of the system within the network management infrastructure is discussed. The emphasis, however, is on highlighting the mathematical model used to evaluate the impact of various bandwidth access control policies on the call level QoS parameters such as call blocking probability, call dropping probability and throughput. Some **priority** based bandwidth access control policies are also defined and compared with conventional policies such as CS (complete sharing), CP (complete partitioning) and PS (partial sharing). A comparative analysis of conventional as well as **priority** based policies is conducted. Some simulation results are presented that reflect upon the effectiveness of **priority** based policies. This performance evaluation derives the engineering methods that are subsequently used to plan and dimension the networks. There are two main contributions of this work. One is the precise formulations developed to predict call level QoS parameters based on the particular policy of bandwidth partitioning. The other is the proposed, traffic measurement and engineering based, framework of the system, which is quite practical and consolidated.

Descriptors

BANDWIDTH-ALLOCATION; BROADBAND-NETWORKS; DIGITAL-SIMULATION;
PROBABILITY; QUALITY-OF-SERVICE; TELECOMMUNICATION-CONGESTION-CONTROL;

TELECOMMUNICATION-NETWORK-MANAGEMENT; TELECOMMUNICATION-NETWORK-PLANNING; TELECOMMUNICATION-TRAFFIC.

Classification codes

B6150P Communication-network-design-planning-and-routing*;
B0240Z Other-topics-in-statistics;
B6210C Network-management.

Keywords

network-revenue-maximization; broadband-networks; performance-evaluation; network-resources-allocation; bandwidth-allocation; telecommunication-networks; adaptive-updating; dynamical-load-variations; economic-considerations; integrated-traffic-engineering-system; global-network-state; optimal-bandwidth-partitioning; call-blocking-probability; quality-of-service; network-management-infrastructure; mathematical-model; bandwidth-access-control-policies; call-level-QoS-parameters; call-dropping-probability; throughput; **priority-based-bandwidth-access-control**; complete-sharing; complete-partitioning; partial-sharing; simulation-results; **priority-based-policies**; network-planning; network-dimensioning; traffic-measurement.

Treatment codes

T Theoretical-or-mathematical.

Language

English.

Publication type

Conference-proceedings.

Digital object identifier

10.1109/HPSR.2000.856690.

Publication year

2000.

Publication date

20000000.

Edition

2000036.

Copyright statement

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Information priority-setting for better resource allocation using analytic hierarchy process (AHP).

Dialog eLinks

USPTO Full Text Retrieval Options

Accession number & update

0006985666 20051201.

Source

Information Management & Computer Security, {Inf-Manage-Comput-Secur- UK}, 2001, vol. 9, no. 2-3, p. 61-70, 35 refs, CODEN: IMCSE4, ISSN: 0968-5227. Publisher: MCB University Press, UK.

Author(s)

Cheng-E-W-L, Heng-Li.

Author affiliation

Cheng, E.W.L., Heng Li, Hong Kong Polytech. Univ., Kowloon, China.

Abstract

Focuses on the use of the analytic hierarchy process (AHP) to prioritize different forms of information. Identification of the key information may help better allocation of resources for a construction project.

Various forms of information and their associated activities may critically affect the project, which have to be carefully dealt with for enhancing the project performance. Essentially, when some of these forms of information have to be produced and managed by more sophisticated information technology, the more we know about their importance level, the better we could **allocate** our investment in the construction project. In general, this study reveals that managerial information is equally as important as technical information. This implies that an overall information system should incorporate the technologies and techniques for generating and maintaining both types of information.

Descriptors

CONSTRUCTION-INDUSTRY; INFORMATION-SYSTEMS; INFORMATION-TECHNOLOGY;
PROJECT-MANAGEMENT; RESOURCE-ALLOCATION.

Classification codes

C7160 Manufacturing-and-industrial-administration*;
E0410D Industrial-applications-of-IT*;
E3030 Construction-industry.

Keywords

information-priority-setting; resource-allocation; analytic-hierarchy-
process; AHP; construction-project; information-technology;
investment; managerial-information; technical-information;
information-system.

Treatment codes

P Practical.

Language

English.

Publication type

Journal-paper.

Availability

SICI: 0968-5227(2001)9:2/3L:61:IPSB; 1-B.

Publication year

2001.

Publication date

20010000.

Edition

2001029.

Copyright statement

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Novel bandwidth allocation scheme for ring networks with spatial reuse.

Dialog eLinks

USPTO Full Text Retrieval Options

Accession number & update

0007576070 20051201.

Conference information

APOC 2002: Asia-Pacific Optical and Wireless Communications. Metro and
Access Networks II, Shanghai, China, 16-17 Oct. 2002.
Sponsor(s): SPIE; Nortel Networks; Santec Corp; Walden Int; JDS
Uniphase Corp; et al.

Source

Proceedings of the SPIE - The International Society for Optical Engineering,
{Proc-SPIE-Int-Soc-Opt-Eng-USA}, 2002, vol. 4908, p. 162-9, 15 refs, CODEN: PSISDG, ISSN:
0277-786X. Publisher: SPIE-Int. Soc. Opt. Eng, USA.

Author(s)

Tang-H, Lambadaris-I.

Author affiliation

Tang, H., Lambadaris, I., Dept. of Syst. & Comput. Eng., Carleton Univ., Ottawa, Ont., Canada.

Abstract

Spatial reuse can significantly increase the throughput of optical ring networks by allowing multiple stations to transmit concurrently over distinct segments of the ring. Buffer insertion ring (BIR) scheme is widely used to achieve spatial reuse. However, because non-preemptive **priority** is usually given to the ring (pass-through) traffic, the BIR scheme may cause fairness problems in allocating the ring bandwidth among distinct nodes. We propose a novel approach that can prevent starvation and maximize the throughput with low complexity. The main idea of this method is that for every node of the ring to provide a separate queue for each source that shares the output link of the particular node. We then fairly **allocate** the output link bandwidth to all the sources based on the weight of the corresponding queues. Simulations and analysis show that this new scheme can provide fairness with less end-to-end delay compared to BIR scheme.

Descriptors

BANDWIDTH-ALLOCATION; BUFFER-STORAGE; DELAYS; NETWORK-TOPOLOGY;
OPTICAL-FIBRE-NETWORKS; QUEUEING-THEORY; TELECOMMUNICATION-TRAFFIC.

Classification codes

B6260F Optical-fibre-networks*;
B0240C Queueing-theory;
B6150J Queueing-systems.

Keywords

bandwidth-allocation; spatial-reuse; throughput; optical-ring-networks; buffer-insertion-ring; **nonpreemptive**-priority; ring-traffic; fairness-problems; network-nodes; starvation-prevention; output-link-bandwidth; source-based-queuing; packet-scheduling; simulation-results; average-end-to-end-delay-analysis.

Treatment codes

T Theoretical-or-mathematical.

Language

English.

Publication type

Conference-proceedings; Journal-paper.

Availability

SICI: 0277-786X(2002)4908L:162:NBAS; 1-F.
CCCC: 0277-786X/02/\$15.00.

Publication year

2002.

Publication date

20020000.

Edition

2003014.

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